

MAYOR EDDIE D. MELTON



**BRENDA SCOTT HENRY**  
*Interim Director*  
AN EQUAL OPPORTUNITY EMPLOYER  
[www.garysanitary.com](http://www.garysanitary.com)

NPDES Permit # IN0022977  
County: Lake  
Gary Sanitary District's -Annual Mercury Progress Report

June 29, 2024

Indiana Department of Environmental Management  
Office of Water Quality-Mail Code 65-42  
Compliance Evaluation Section-Pretreatment Group  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

**SUBJECT: INDUSTRIAL PRETREATMENT**  
Annual Mercury Progress Report

Dear Sir/Madam:

I am pleased to submit the Gary Sanitary District's Annual Progress Report for the Streamlined Mercury Variance (SMV) as it is required under the Pollutant Minimization Program Plan (PMPP).

If there are any additional questions please contact me at 3600 W. 3<sup>rd</sup> Ave. Gary, Indiana or call me at (219) 944-0595 ext. 1229.

Sincerely,

Maurice L. Joiner, RPC  
IPP Coordinator, Gary Sanitary District

Enclosure

cc: Brenda Scott Henry, Director  
Bob Theodorou, Pretreatment/Laboratory Services Mgr.  
File



# **GARY SANITARY DISTRICT**

**THE  
INDUSTRIAL PRETREATMENT PROGRAM  
STREAMLINED MERCURY VARIANCE  
ANNUAL PROGRESS REPORT  
FOR  
2023-2024**

**3600 West 3<sup>rd</sup> Avenue  
Gary, Indiana 46406  
Phone: (219) 944-0595**

**HONORABLE MAYOR EDDIE D. MELTON  
CITY OF GARY, INDIANA**

**BRENDA SCOTT HENRY  
INTERIM EXECUTIVE DIRECTOR  
GARY SANITARY DISTRICT**

**BOARD OF SANITARY COMMISSIONERS**

**COMMISSIONERS**

**William Allen  
Ola V. Morris  
Maurice G. Mabon  
William Cook  
Darnail Lyles**



Gary Sanitary District

## Streamlined Mercury Variance

### Pollutant Minimization Program Plan

GARY SANITARY DISTRICT

3600 West 3<sup>RD</sup> Avenue

Gary, IN 46406

Annual Progress Report – June 2024

## INTRODUCTION

The Gary Sanitary District has received a streamlined mercury variance (SMV) as part of the facility's renewed NPDES permit with an effective date of July 1, 2022. Under the SMV procedures of 327 IAC 5-3.5-8, a variance from the water quality criterion for mercury (interim limit) was developed. For the duration of the NPDES permit, the plant's effluent discharge is subject to this interim limit.

## FACILITY DESCRIPTION

The Gary Sanitary District is a Class IV, 60 MGD average design flow single stage activated sludge wastewater treatment plant. The facility consists of a trash rack, four mechanical bar screens, two grit tanks, ten primary settling tanks, six aeration basins, twenty-four secondary clarifiers and ten two-cell single media filters. Disinfection is by sodium hypochlorite followed by de-chlorination utilizing sodium bisulfate. Phosphorus removal is by chemical precipitation. The final effluent is discharged into Grand Calumet River. Sludge is thickened by gravity thickeners (primary sludge) and by a gravity belt thickener (secondary sludge) followed by anaerobic digestion and dewatering by belt filter presses. Final bio-solids are disposed of in a sanitary landfill.

## ANNUAL PROGRESS REPORT

The following report summarizes the efforts taken by the Gary Sanitary District into the identification of potential sources of mercury pollutant discharge into the sewer system.

### Mailers and Survey forms

Letters and survey forms were mailed out to Industrial Users, Dental Offices, and Private/Public Institutions on December 31, 2022 requesting the assistance of the mail recipients into identifying potential sources of mercury within their facility and listing any disposing procedures and/or BMPs in place. The Gary Sanitary District experienced infiltration to its computer system in February 2022. Most current system files were infiltrated or lost. HVAC/ Appliance and Medical Facilities survey has been prepared and mailed July 1, 2023. There were poor responses to the initial mailings. The Gary Sanitary District Industrial Pretreatment Program Department increased its efforts and conducted site visits and phone calls to all groups listed under the Pollutant Minimization Program Plan. Site visits and phone calls were used as tools to complete



surveys that are not returned initially. A significant improvement in survey responses were seen. Many businesses have closed. An attempt to visit all sites that did not send in surveys were made. All surveys were updated or renewed under the new 2022 permit cycle. Surveys sent electronically may have been lost. Businesses that were visited but not received has been marked as Pending-SV. All visits include and interview and “BMP” material provide. A master email data base is being created to do mass mailings of best management practices information.

### **Treatment Plant Inventory**

A preliminary inventory has been conducted through the treatment plant and lift stations on machinery that are equipped with parts containing mercury. An extensive removal of lighting that contains the potential of Mercury sources was conducted in 2021,2022 and 2023. A primary electrician was dedicated to upgraded systems/lighting that contains Mercury. The dollar amounts spent on lighting for 2022 and 2023 was not available at the time of the report compilation.

### **Chemicals**

The attached facility layout indicates the locations where chemicals are stored throughout the treatment plant. Chemicals in bulk quantities are stored and used in the treatment processes. Sodium hypochlorite and sodium bisulfate are used for disinfection during the summer season (April through October) There was a new vendor selected for the purchase of the Sodium Bisulfite since the reporting period of 2020-2021. The new vendor is PVS. The vendors SDS sheet states that the product does not contain any “Proposition 65 Chemicals” in which Mercury is categorized. Polymer is used to aid thickening and sludge dewatering. Ferrous Chloride is used for phosphorous removal in small amounts. The three year average for all chemicals are as follows: Sodium Hypochlorite 280,620 gal, Sodium Bisulfite 100,844 gal, Ferris Chloride 2,822 gals, Mannic Polymer 1,346,313 pounds. Emulsion Polymer 136,994 pounds. The average results are reported for the average of the previous three year cycle.

### **Public education and awareness,**

The Gary Sanitary District promoted Mercury Awareness and conducted Mercury collection at the City of Gary- Annual Household Hazardous Waste Collection on June 1, 2024. A table with Mercury Information materials were at the event. An Industrial Pretreatment Program worked the event and assisted with the disposal of potentially hazardous material.



Gary Sanitary District

## Streamlined Mercury Variance Pollutant Minimization Program Plan

GARY SANITARY DISTRICT  
3600 West 3<sup>RD</sup> Avenue  
Gary, IN 46406

Annual Progress Report – June 2024

The City of Gary hosted a “Community Forum Event” on June 20, 2024. A new informational board with “Mercury Information” was on display for view with handouts.

An employee informational session and training about “Risk of Mercury” was conducted by Maurice L. Joiner of the Gary Sanitary District on June 27, 2024 at the “Mens- Health” forum. An explanation of the Pollutant Minimization Program Plan, Ways to handle Mercury at home and in the workplace a some health tips, were shared with the Gary Sanitary District staff. There were approximately 90 team members registered for the event. efforts to reduce the pollutant (mercury) from entering the waterways. The presentation was recorded.

### **New**

The Gary Sanitary District erected two billboards on main roads in the City of Gary. The billboards were on 22<sup>nd</sup> and Broadway and near Ridge Rd. and Cleveland St. The boards promoted “Household Hazardous Waste Collection Day” with a statement about the toxic effects of “Mercury”. Its estimated that about 14,500 car travel those roads daily.

### **Procurement Policy**

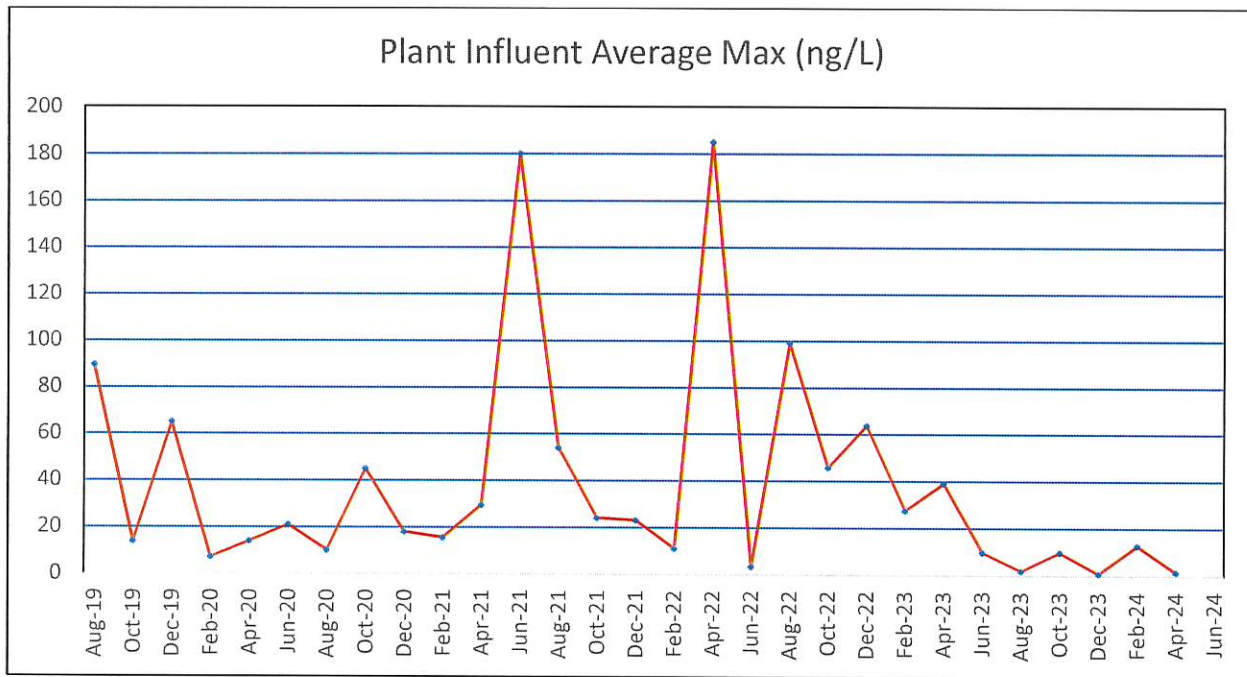
The Gary Sanitary District adopted a Standard Procurement Policy on January 15, 2014. The current policy is under review.



**MERCURY MONITORING RESULTS**

The graph below illustrates the wastewater treatment plant’s concentration results for low level mercury at the plant’s influent from June 2019 to June 2024.

**Gary Sanitary District  
Influent Mercury Max Results (ng/l)  
2019 – 2024**



Year	Influent Max Concentration (ng/l)
2019	90
2020	45
2021	180
2022	185
2023	27



Gary Sanitary District

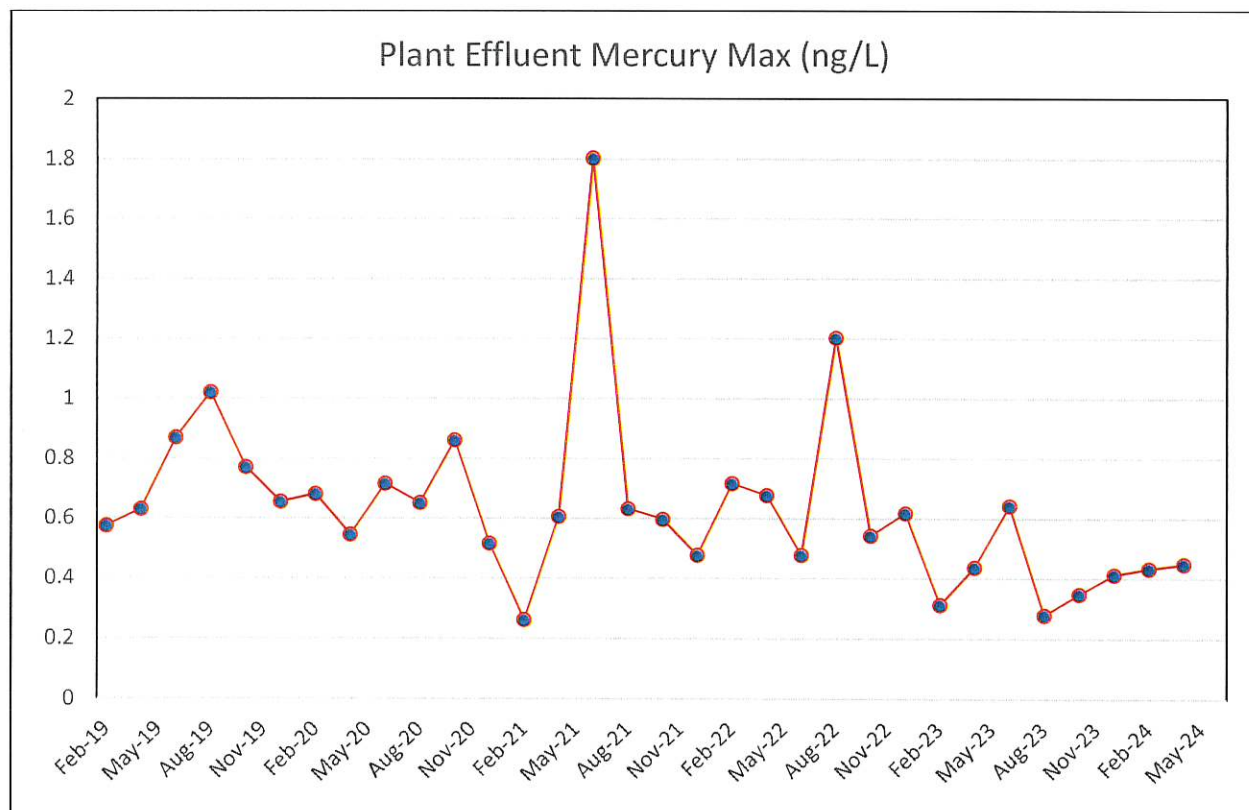
## Streamlined Mercury Variance Pollutant Minimization Program Plan

GARY SANITARY DISTRICT  
3600 West 3<sup>RD</sup> Avenue  
Gary, IN 46406

Annual Progress Report – June 2024

The graph below illustrates the wastewater treatment plant’s max concentration results for low level mercury at the plant’s final effluent from June 2019 to June 2024.

**Gary Sanitary District  
Effluent Mercury Max Results (ng/l)  
2019 – 2024**



Year	Effluent Max Concentration (ng/l)
2019	1.02
2020	0.86
2021	1.8
2022	1.2
2023	0.64



### Mercury Plant Inventory

The tables below indicate loads for Influent and Effluent based on the Average of Max monthly concentrations for the last five years (2019 through 2023).

#### Influent

Year	Influent Flow Annual Total (MG)	Influent Hg Annual Max Avg (ng/l)	Influent Hg Annual Max Load (Kg)
2019	20,482.1	42.2	3.273
2020	18,196.8	19.2	1.323
2021	13,945.7	54.3	2.867
2022	13,904.6	67.9	3.575
2023	13,386.5	14.7	0.745

#### Effluent

Year	Effluent Flow Annual Total (MG)	Effluent Hg Annual Max Avg (ng/l)	Effluent Hg Annual Max Load (Kg)
2019	20,407.0	0.75	0.058
2020	18,085.5	0.66	0.045
2021	13,857.2	0.73	0.038
2022	13,820.5	0.70	0.037
2023	13,294.9	0.40	0.020

#### Sludge

Year	Sludge cake Disposed Annual Total (Dry Metric Tons) – 503 DMR	Sludge Mercury Annual Avg (mg/Kg – Dry wt)	Sludge Mercury Annual Load (Kg)
2019	5,744	0.47	2.7
2020	5,571	0.72	4.0
2021	5,178	0.36	1.9
2022	5,892	0.24	1.4
2023	4,717	0.30	1.4





Gary Sanitary District

## Streamlined Mercury Variance Pollutant Minimization Program Plan

GARY SANITARY DISTRICT  
3600 West 3<sup>RD</sup> Avenue  
Gary, IN 46406

Annual Progress Report – June 2024

### Table of Attachments

The following documents are attached:

- Mercury Hours and Budget
- Facility layout and locations of bulk chemicals
- Schedule of Action, Part III A and B
- Schedule of Action, Part III C
- Household Hazardous Waste – 2024 Flyer
- Community Forum Flyer
- Men’s Health Flyer
- Mercury Sources and Disposal Survey (letter and survey form)
- BMP Survey Summation Table I
- BMP Survey Summation II & III
- Mercury Compliance Status – Physicians and Medical Facilities
- Mercury Compliance Status – Dentists and dental facilities
- Mercury Compliance Status – Veterinarians and Animal hospitals
- Mercury Compliance Status – Automotive and Appliance repair facilities
- Mercury Compliance Status – Private and Public Educational Laboratories
- Mercury Compliance Status – Industrial and Commercial Facilities
- Mercury Compliance Status – Permitted Facilities
- Treatment Plant Inventory
- Clarifloc C-6253 Safety Data Sheet
- Clarifloc C-311 Safety Data Sheet
- Sodium Bisulfate (Mercury Results)
- All other Chemicals such as Sodium Hypochlorite and Ferrous Chloride was not available at the time a report assembly. An amendment to the file and 2025 report will be made when the data is received.

# MECURY VARIANCE

## Hours/Budgets 2023-2024

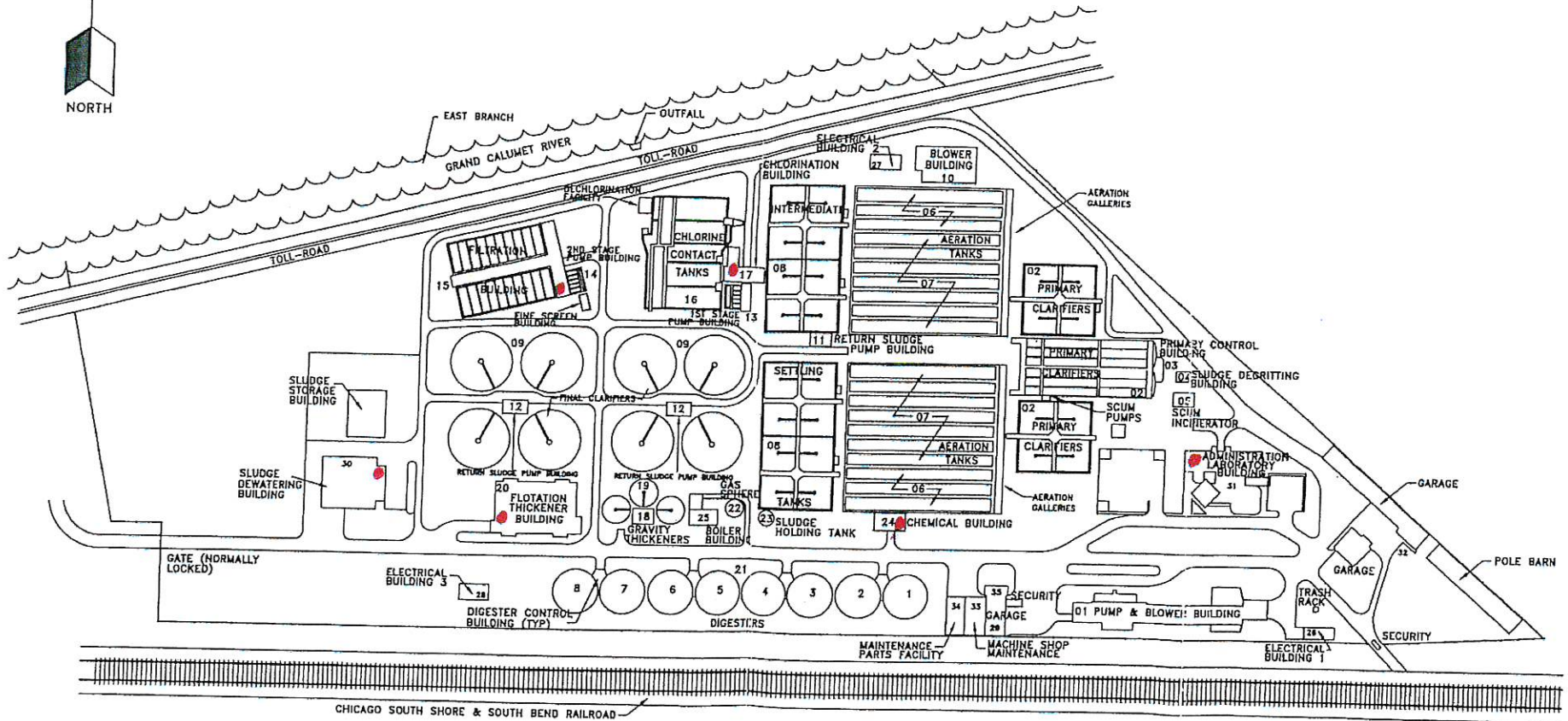
- **Bob Theodorou-Lab IPP Manager**  
Tests and Costs Associated with Variance Plan  
**\$6540.00**
- **Maurice L. Joiner** – IPP Coordinator-48 X 35.00=**\$1680.00**
- **Kevin Smith**-IPP inspector 33 hours
- **Jazmine Cauley** -IPP Admin- Unknown

Expense Estimates/ 2023 Totals being used-Likely Consistent or Greater than 2024

- Chemical Bid requests and or renewals 24 hours a year -**\$1038.46**
- Chemical Ordering – **104 Hours \$2912.00**

**185 Hours** were spent in the 2023/2024 Calendar year the Hours for Lab/ IPP Admin and Sweney Electric's Amounts and Hours are not included. A Dollar total of **12,170.46** was spent as a minimum in 2023/2024 Yearly Cycle.

FIGURE 3-10



GARY SANITARY DISTRICT  
WWTTP EXISTING SITE PLAN

KEY  
01 FACILITIES BUILDING NUMBER DESIGNATION



• Chemical Storage Areas

GARY SANITARY DISTRICT  
FACILITIES PLAN  
JULY 1988

Gary Sanitary District  
Streamlined Mercury Variance Application  
Pollutant Minimization Program Plan (Part III A. and B.)

Annual Progress Report (July 2023-2024)

Sector	Planned Activity	Goal	Measure of Performance	Schedule	Progress Report
<b>Wastewater Treatment Facility</b> <ul style="list-style-type: none"> <li>• Operations</li> <li>• Maintenance</li> <li>• Warehouse</li> <li>• Laboratory</li> <li>• Industrial Pretreatment</li> </ul>	Inventory/identification of potential sources of mercury at POTW	Mercury-free where practical	Final inventory and documentation from suppliers	9 months after SMV approval/permit modification	Ongoing Inventory was identified under previous reporting periods Updated documentation identifying the Mercury content in frequently used chemicals have been requested provided. A new Mercury Sources evaluation of the POTW will be conducted in 2024-2025.
	Review of purchasing policies and procedures	Restrict or eliminate, where practical, purchase of mercury containing equipment and supplies	Adoption of policies and procedures	9 months after SMV approval/permit modification	Ongoing-Mercury Procurement Policy was created in 2014. It is in the process of being updated.
	Training and awareness of facility staff	Promote BMP implementation	Participation and adherence to program	9 months after SMV approval/permit modification	Ongoing Training of staff is ongoing. A recent training event was held June 27, 2024 at Mens Health Day onsite.
	Public education program within service area	Education/awareness materials	Participation	9 months after SMV approval/permit modification	Ongoing GSD presented information to discuss Mercury Reduction at the City of Gary Household Hazardous Waste collection event held on June 1, 2024 the promotional flyer included facts and items for disposal that could possibly contain Mercury, inserted into gift bags. The Mayors Community engagement event held on June 30, 2024. A board with Mercury "BMP" was on display. Billboards were put in areas 14,500 cars per day to warn of "Mercury" Hazards.
	Evaluation of alternatives to mercury containing equipment and materials	Mercury free where practical		9 months after SMV approval/permit modification	Ongoing Replacement of lighting and equipment continues.
<b>Collections Division</b>	Collection system	Vactor solids from catch basins	CSOOP program and material removed	Ongoing	Ongoing
	Lift stations	Vactor accumulated solids from lift stations	CSOOP program and material removed	Ongoing	Ongoing Inventory of equipment and parts containing mercury is ongoing. A total replacement of Mercury contained lighting devices and switches are in progress Primary Administration building is included and completely converted to LED Lighting 2024.

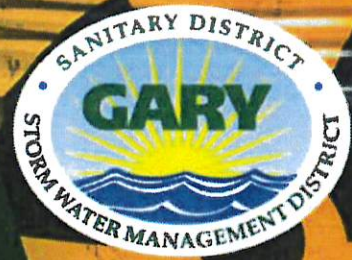
Gary Sanitary District  
Streamlined Mercury Variance Application  
Pollutant Minimization Program Plan (Part III C.)

Annual Progress Report (June 2024)

Sector	Planned Activity	Goal	Measure	Schedule	Progress Report
<b>Medical Facilities, including</b> <ul style="list-style-type: none"> <li>• Hospitals</li> <li>• Clinics</li> <li>• Nursing homes</li> <li>• Veterinary facilities</li> </ul>	Mail Surveys and BMP requirements	Education/awareness	Date mailed and content	9 months after SMV approval	Ongoing/ Email Data Base being Created to send BMP Info electronically.
	On-site visits / meeting with facility manager	Promote BMP implementation	Participation	9 months after SMV approval	Ongoing
	Workshops	Education/awareness	Participation	6 months after SMV approval	Ongoing, Met personally with most facilities one on one or by phone in 2023-2024.
	BMP requirements	Mercury-free where ever practicable	Progress, quantity recycled	9 months after SMV approval	Ongoing, recommended in mailer. Requirements were discussed with IU's during site visits/ inspections.
<b>Dental Clinics</b>	Mail appropriate BMP literature	Education/awareness	Date mailed and content	6 months after SMV approval	Ongoing/ Email Data Base being Created to send BMP Info.electronically.
	Meetings with dentists	Education/awareness	Participation	6 months after SMV approval	Ongoing
	On-site visits	Promote BMP implementation	Participation	6 months after SMV approval	Ongoing Site Visits were attempted to all Dental offices in 2023/2024
	Surveys	Participation	Participation	9 months after SMV approval	Yes/ Ongoing
	Adherence to ADA's BMP ( <i>voluntary or mandatory</i> )	Minimize mercury discharged	Adoption/implementation	9 months after SMV approval	Ongoing, Recommended during site visits.
	Mercury recycling ( <i>voluntary or mandatory</i> )	Minimize mercury discharged	Quantity recycled	12 months after SMV approval	Ongoing, Recommended during site visits.
	Adoption of removal equipment meeting ISO standards	Adoption/implementation	Adoption/implementation	12 months after SMV approval	Ongoing, Recommended during site visits.
<b>Public and Private Educational laboratories</b>	Mail appropriate BMP literature	Education/awareness	Date mailed and Participation	6 months after SMV approval	Ongoing/ Email Data Base being Created to send BMP Info.electronically.
	Workshops	Education/awareness	Participation	12 months after SMV approval	Ongoing/ During site Visits.
	On site visits	Mercury reduction	Participation	9 months after SMV approval	Ongoing
<b>General industry and all SIUs</b>	Mail chemical/equipment literature	Education/awareness	Date mailed and Participation	6 months after SMV approval	1 <sup>st</sup> survey 12/31/2022, All SIU's will be addressed with Annual Inspections. .
	On-site visit during pretreatment inspection	Ensure permit compliance education/awareness	Compliance evaluation	To coincide with annual pretreatment inspection	Ongoing
	Application of local limits	Mercury reduction	Compliance evaluation	To coincide with permit renewal	Enforced
<b>Significant sources of residential and retail contribution of mercury, for example, the following:</b> <ul style="list-style-type: none"> <li>• HVAC contractors</li> <li>• Auto &amp; appliance repair</li> <li>• Others specific to the community served</li> </ul>	Mail appropriate BMP literature	Education/awareness	Participation	12 months after SMV approval	Mailed 7/1/2023 , Ongoing
	Workshops	Education/awareness	Participation	12 months after SMV approval	Ongoing/ In Person SV to give BMP information
	On site visits	Promote BMP implementation	Participation	9 months after SMV approval	Ongoing
	Trade association coordination, where appropriate	Increased participation	Participation	9 months after SMV approval	Ongoing/ Piggy Back Trade Conference Spring 2025
	Surveys	Participation	Participation	9 months after SMV approval	Ongoing SV to all IU's that did not reply.

# SAVE THE DATE

## CITY OF GARY HOUSEHOLD HAZARDOUS WASTE COLLECTION & ENVIRONMENTAL STEWARDSHIP DAY



**DATE: JUNE 1, 2024**

**TIME: 9AM-2PM**

**LOCATION:**

**455 MASSACHUSETTS ST  
GARY, IN – (PARKING LOTS)**

### FREE SERVICES:

- ✓ Environmental booths, E-Recycling
- ✓ Waste Tire Disposal, Recycling Bins, Paper Shredding
- ✓ Gas Can exchange Refreshments & More!



Scan for list



Gary Stormwater Mgmt. District / Gary  
Office of Sustainability and  
Environmental Affairs (219) 882-3000



E-mail: [delbrown@gary.gov](mailto:delbrown@gary.gov)  
[rebradley@gary.gov](mailto:rebradley@gary.gov)

*Residents of Gary are cordially invited to a ...*

# COMMUNITY FORUM



*Hosted by Mayor Eddie D. Melton & Team*

**Thursday, June 20, 2024**

**5:30pm to 7:30pm**

Temple of Deliverance in Christ  
4929 W. 15th Ave. • Gary, IN

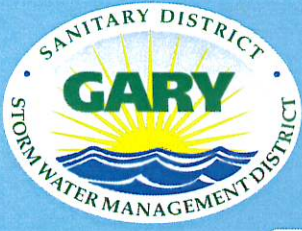
Learn more about the work  
of the Mayor and his team.

Share your feedback  
and get concerns  
addressed at  
designated 311  
stations.

For more information, please  
contact us at (219) 881-1300  
or [mayorsoffice@gary.gov](mailto:mayorsoffice@gary.gov)

**[gary.gov](http://gary.gov)**





GSD WELLNESS COMMITTEE PRESENTS  
IN SUPPORT OF MEN'S HEALTH AWARENESS

# MEN'S HEALTH

## LUNCH & LEARN

Wear Blue in support of Men's Health Awareness

**WHEN: Thursday, June 27, 2024 @11am**

**WHERE: GSD Board Room/ Or TEAMS (virtual)**

**\*\* Please indicate on order form if attending in-person or virtual \*\***

**Speaker: Dr. Angela Wheeler, MD**

### Announcement

**The Mile A Day  
Challenge Winner(s)**

Food provided by: Food Express Cafe

- ★ Chicken Salad
- ★ Veggie Wrap
- ★ Turkey Sub
- ★ Chicken Salad on Croissant
- ★ Garden Salad

\*Please specify salad dressing when placing order\*

\*NO add-ons or substitutions\*

**SUBMIT ORDERS TO WELLNESS@GARYSAN.COM BY THURSDAY, JUNE 20, 2024**



**Gary Sanitary District**

**Gary, Indiana**

**Pollutant Minimization Program Plan (PMPP)**

**NPDES Permit Number IN0022977**

**Best Management Practice (BMP) Survey Summation For 2022-2024**

**Table I**

**Best Management Practice (BMP) Survey Summation**

<b>Number</b>	<b>Business Sector</b>	<b>No. of Business Surveyed</b>	<b>No. of Surveys Returned</b>	<b>Percent Surveys Returned</b>
1	Appliance /Auto Repair	37	7	18.9%
2	Physicians and Medical Facilities	19	3	15.7%
3	Dental/Dental Facilities	9	5	55.55%
4	Private/Public Ed.	8	7	87.5%
5	Industrial/Commercial	15	10	66.66%
6	Permitted Industries	13	9	69.23%
7	Veterinarians	2	2	100%
	<b>Totals</b>	103	43	59%

- **The initial mainlining responses were a low return rate. The response improved tremendously with Site Visits, Phone Calls and additional staffing. It has been noticed that many businesses has adopted “Mercury Free” Practices and lighting . All surveys and return responses have been combined into one total. New listings will be included with next annual report because many businesses have opened and closed because of possibly pandemic related practices. A review of the actually factual sheets will give a clear picture of closed business and pending return rates that will boost response numbers.**

**GARY SANITARY DISTRICT  
IN0022977**

**Industrial Pretreatment Program  
Pollutant Minimization Program Plan (PMPP)  
Physicians & Medical Facilities**

<b>No.</b>	<b>Physicians &amp; Medical Facilities</b>	<b>Date Survey Received by GSD</b>	<b>Hg containing Equipment and/or BMP in place</b>
1	Anekwe Adolphus A Md Mph	Pending -SV	
2	Broadway Medical Corp (Same as #1)	Pending -SV	
3	Comprehensive Care OCC Health	Pending -SV	
4	Community Health Net	6/25/2024	YES
5	Family Medicine Consultants Group		
6	Gary Community Health Center	6/27/2024	YES
7	Interal Medicine Center		
8	Methodist Hospital Physicians Group	Pending -SV	
9	Midwest Intergrated Health	CLOSED	
10	Northwest Center for Medical (Same as # 1)	Pending -SV	
11	Oak St. Health	Pending -SV	
12	Primary Care Physicians (ROSS)	Pending -SV	
13	Ross Family Doctors	8/4/2023	YES
14	Simmons Loving Care Health Facility	Mailed-2ND	
15	Simpson, Steve Md	CLOSED	
16	South Shore Health & Rehabilitation	Mailed-2ND	
17	Timberview Health Care Center(Aperion)	Mailed-2ND	
18	University Park Medical Center	Pending -SV	
19	Walker Medical	Pending -SV	

**GARY SANITARY DISTRICT  
IN0022977**

**Industrial Pretreatment Program  
Pollutant Minimization Program Plan (PMPP)**

**Dentists & Dental Facilities**

<b>No.</b>	<b>Dentists &amp; Dental Facilities</b>	<b>Date Survey Received by GSD</b>	<b>Hg containing Equipment and/or BMP in place</b>
1	Broadway Dental & Lab	CLOSED	
2	Children's Dental Clinic of Gary ( The Village)	6/13/2024	YES
3	Dentists for Kids (Familia)	CLOSED	
4	Gassoway Lynn E.	CLOSED	
5	General Dentistry	6/25/2024	YES
6	Healthy Smiles	6/14/2024	YES
7	McDonald Edwin K III Dds Assoc (Comm H. )	6/24/2025	YES
8	Radcliffe Family Dental	CLOSED	
9	5th Avenue Dental (Community Health Net)	6/25/2024	YES

Gary Sanitary District

Jun-24

**GARY SANITARY DISTRICT  
IN0022977**

**Industrial Pretreatment Program  
Pollutant Minimization Program Plan (PMPP)**

**Veterinarians & Animal Hospitals**

<b>No.</b>	<b>Veterinarians &amp; Animal Hospitals</b>	<b>Date Survey Received by GSD</b>	<b>Hg containing Equipment and/or BMP in place</b>
<b>1</b>	Glen Park Animal Hospital	6/13/2024	YES
<b>2</b>	Humane Society	6/14/2024	YES

**GARY SANITARY DISTRICT  
IN0022977**

**Industrial Pretreatment Program  
Pollutant Minimization Program Plan (PMPP)**

**Automotive Repair/ Appliance Repair/Heating & Cooling**

<b>No.</b>	<b>Automotive &amp; Appliance Repair Facilities</b>	<b>Date Survey Received by GSD</b>	<b>Hg containing Equipment and/or BMP in place</b>
1	ABC Auto Sales & Tire Repair	CLOSED	
2	Ability Heating & Cooling	CLOSED	
3	Air Filter Heating & Cooling	CLOSED	
4	Air Rich Heating & Cooling	CLOSED	
5	Active Auto Repair	Pending-SV	
6	American Brakes and Muffler	6/20/2024	NO
7	Autozone	6/20/2024	NO
8	Barnes Washer Parts Repair	CLOSED	
9	Broadway Auto Parts	6/20/2024	NO
10	C&G Auto Sales	Pending-SV	
11	Car X Auto Service	CLOSED	
12	Checkered Flag Imports Inc	6/20/2024	Yes
13	Clark's Auto Body Repair	Pending-SV	
14	Coach USA	CLOSED	
15	Complete Automotive INC	CLOSED	
16	Day & Night Certified Heating	Pending-SV	
17	Glen Park Autoworks	6/20/2024	Yes
18	Hellman's Tire Service	6/20/2024	Yes
19	I-80 Auto Parts Company	Pending-SV	
20	Jay's Mechanical Contractor	CLOSED	
21	Joesph English Arco Service	CLOSED	
22	King Muffler & Brake Shop	Pending-SV	
23	Lika Trucking Repair Inc	Not Gary	
24	Mechanical Concepts	Pending-SV	
25	Midas Auto Service Experts	CLOSED	
26	Moore's Heating & Cooling	CLOSED	

No.	Automotive & Appliance Repair Facilities	Date Survey Received by GSD	Hg containing Equipment and/or BMP in place
27	Mikes Emissions	CLOSED	
28	Peoples Comfort Heat	CLOSED	
29	Prichett's Auto Repair	*	
30	Professional Fleet Maintenace	Pending-SV	
31	Republic Frame & Axle	6/21/2024	Yes
32	Roberts Auto Technicians	Pending-SV	
33	Sherrod's Auto Body Repair	Pending-SV	
34	Sonny's Auto Repair	CLOSED	
35	Son's Transmission	CLOSED	
36	Spray Master Auto Collision	Pending-SV	
37	US Tire & Auto Service Center	Pending-SV	

**GARY SANITARY DISTRICT  
IN0022977**

**Industrial Pretreatment Program  
Pollutant Minimization Program Plan (PMPP)  
Private & Public Educational Laboratories**

<b>No.</b>	<b>Schools &amp; Educational Facilities</b>	<b>Date Survey Received by GSD</b>	<b>Hg containing Equipment and/or BMP in place</b>
1	21st Century Charter School of Gary	6/6/2024	YES
2	Ambassador Academy	6/10/2024	YES
3	Aspire Charter Academy	6/10/2024	YES
4	Charter Schools of the Dunes	6/6/2024	YES
5	Gary Community School Corporation	6/6/2024	YES
6	Indiana University Northwest Campus	6/6/2024	YES
7	Sister Thea Bowman Elementary School	CLOSED	
8	Thea Bowman Leadership Academy	6/10/2024	YES

**GARY SANITARY DISTRICT  
IN0022977**

**Industrial Pretreatment Program  
Pollutant Minimization Program Plan (PMPP)**

**Industrial & Commercial Facilities**

<b>No.</b>	<b>Industrial &amp; Commercial Facilities</b>	<b>Date Survey Received by GSD</b>	<b>Hg containing Equipment and/or BMP in place</b>
1	Boeing Company	6/21/2024	YES
2	Chase St. Industrial Partners		
3	CWS	6/21/2024	YES
4	EJ& E / Canadian National	6/27/2024	YES
5	Gary Jet Center	6/27/2024	YES
6	Gary Regional Airport	6/27/2024	YES
7	GPTC	6/20/2024	YES
8	Great Lakes Industrial		
9	HealthCare Waste Management	CLOSED	
10	Indiana Investments	6/26/2024	YES
11	Industrial Steel Construction	6/26/2024	YES
12	Metal Resources	CLOSED	
13	NIPSCO		
14	Roehl Transport	6/14/2024	YES
15	Swift Trucking	6/25/2024	YES



**GARY SANITARY DISTRICT  
IN0022977**

**Industrial Pretreatment Program  
Pollutant Minimization Program Plan (PMPP)**

**Permitted Facilities**

<b>No.</b>	<b>Permitted Facilities</b>	<b>Date Survey Received by GSD</b>	<b>Hg containing Equipment and/or BMP in place</b>
1	Beaver Oil		
2	Chicago Steel	6/20/2024	YES
3	Gary Sanitary Landfill	6/26/2024	NO
4	Indiana American Water		
5	Lakeshore Trucking	10/24/2023	YES
6	Love's	6/5/2024	NO
7	Methodist Hospital		
8	Monosol	2/15/2023	YES
9	Petro Grant St.	6/12/2024	YES
10	Schneider Trucking Co.	6/17/2024	YES
11	Stericycle	6/11/2024	YES
12	Travel Centers America	6/10/3024	YES
13	USS Corporation		

**GARY SANITARY DISTRICT  
IN0022977**

**Industrial Pretreatment Program  
Pollutant Minimization Program Plan (PMPP)**

**WW Treatment Plant**

<b>Department</b>	<b>Mercoïd Pressure Switch</b>	<b>Mercury Vapor Lights</b>	<b>Thermostats containing Mercury</b>
Boiler Building	6		
Chemical Building		51	
Digesters	12		
Filter Building	7	17	
Floatation Thickener Building	3	4	
Gravity Thickener Building		2	
HVAC			41
Lift Stations	1	7	
Primary Tanks & Galleries	4		
Pump Room	17		
RAS Building (East)	0		
RAS Building (Modified)	4		
RAS Building (West)	0		
Warehouse	2	121	



# SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

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## **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

### 1.1. Product identifier

Product name: **CLARIFLOC™ C-6253**

Type of product: Mixture.

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Processing aid for industrial applications.

Uses advised against: None.

### 1.3. Details of the supplier of the safety data sheet

Company: POLYDYNE INC  
1 Chemical Plant Road  
PO BOX 279  
Riceboro, GA 31323

Telephone: 1-800-848-7659

Telefax: (912)-884-8770

E-mail address: -

### 1.4. Emergency telephone number

24-hour emergency number: 1-800-424-9300

## **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

Classification according to paragraph (d) of 29 CFR 1910.1200:

Not classified.

### 2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s): None.

Signal word: None.

Hazard statement(s): None.

Precautionary statement(s): None.

### 2.3. Other hazards

Spills produce extremely slippery surfaces.

For explanation of abbreviations see Section 16.

## **SECTION 3: Composition/information on ingredients**

### 3.1. Substances

Not applicable, this product is a mixture.

### 3.2. Mixtures

#### Hazardous components

#### Distillates (petroleum), hydrotreated light

Concentration/ -range: 20 - 30%

CAS Number: 64742-47-8

Classification according to paragraph (d)  
of 29 CFR 1910.1200: Asp. Tox. 1;H304

#### Notes

Does not result in classification of the mixture if the kinematic viscosity is greater than 20.5 mm<sup>2</sup>/s measured at 40°C.

#### Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Concentration/ -range: < 5%

CAS Number: 69011-36-5

Classification according to paragraph (d)  
of 29 CFR 1910.1200: Acute Tox. 4;H302, Eye Dam. 1;H318

For explanation of abbreviations see section 16

## **SECTION 4: First aid measures**

**SECTION 4: First aid measures***4.1. Description of first aid measures**Inhalation:*

Move to fresh air. No hazards which require special first aid measures.

*Skin contact:*

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

*Eye contact:*

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

*Ingestion:*

Rinse mouth with water. Do NOT induce vomiting. Call a physician or poison control centre immediately.

*4.2. Most important symptoms and effects, both acute and delayed*

None under normal use.

*4.3. Indication of any immediate medical attention and special treatment needed*

None reasonably foreseeable.

*Other information:*

None.

**SECTION 5: Firefighting measures***5.1. Extinguishing media**Suitable extinguishing media:*

Water. Water spray. Foam. Carbon dioxide (CO<sub>2</sub>). Dry powder.

Warning! Spills produce extremely slippery surfaces.

*Unsuitable extinguishing media:*

None known.

*5.2. Special hazards arising from the substance or mixture**Hazardous decomposition products:*

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO<sub>x</sub>), carbon oxides (CO<sub>x</sub>). Ammonia (NH<sub>3</sub>). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

*5.3. Advice for firefighters**Protective measures:*

Wear self-contained breathing apparatus and protective suit.

*Other information:*

Spills produce extremely slippery surfaces.

**SECTION 6: Accidental release measures***6.1. Personal precautions, protective equipment and emergency procedures**Personal precautions:*

Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

*Protective equipment:*

Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

*Emergency procedures:*

Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

*6.2. Environmental precautions*

As with all chemical products, do not flush into surface water.

*6.3. Methods and material for containment and cleaning up**Small spills:*

Do not flush with water. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

*Large spills:*

Do not flush with water. Dam up. Soak up with inert absorbent material. Clean up promptly by scoop or vacuum.

*Residues:*

After cleaning, flush away traces with water.

*6.4. Reference to other sections*

SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 13: Disposal considerations;

**SECTION 7: Handling and storage***7.1. Precautions for safe handling*

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not eat, drink or smoke.

*7.2. Conditions for safe storage, including any incompatibilities*

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

*7.3. Specific end use(s)*

This information is not available.

**SECTION 8: Exposure controls/personal protection***8.1. Control parameters**Occupational exposure limits:*

*Distillates (petroleum), hydrotreated light*

ACGIH: 200 mg/m<sup>3</sup> (8 hours) (vapors)

## 8.2. Exposure controls

### Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas. Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

### Individual protection measures, such as personal protective equipment:

#### a) Eye/face protection:

Safety glasses with side-shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

#### b) Skin protection:

i) *Hand protection:* PVC or other plastic material gloves. Be aware that liquid may permeate gloves, frequent change is advised. Suitable gloves can be recommended by the glove supplier. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

ii) *Other:* Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### c) Respiratory protection:

No personal respiratory protective equipment normally required.

#### d) Additional advice:

Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls:

Do not allow uncontrolled discharge of product into the environment.

## **SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

- |   |                        |
|---|------------------------|
| a) Appearance:                              | Viscous liquid, Milky. |
| b) Odour:                                   | Aliphatic.             |
| c) Odour Threshold:                         | No data available.     |
| d) pH:                                      | Not applicable.        |
| e) Melting point/freezing point:            | < 5°C                  |
| f) Initial boiling point and boiling range: | > 100°C                |

g) Flash point:	Does not flash.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	Not applicable.
j) Upper/lower flammability or explosive limits:	Not expected to create explosive atmospheres.
k) Vapour pressure:	2.3 kPa @ 20°C
l) Vapour density:	0.804 g/L @ 20°C
m) Relative density:	1.0 - 1.2 (See Technical Bulletin or Product Specifications for a more precise value, if available)
n) Solubility(ies):	Completely miscible.
o) Partition coefficient n-octanol/water (log value):	Not applicable.
p) Autoignition temperature:	Not applicable.
q) Decomposition temperature:	> 150°C
r) Viscosity:	> 20.5 mm <sup>2</sup> /s @ 40°C
s) Kinematic viscosity:	No data available.
t) Explosive properties:	Not expected to be explosive based on the chemical structure.
u) Oxidizing properties:	Not expected to be oxidising based on the chemical structure.
v) Particle characteristics:	Not applicable.

#### 9.2. Other information

None.

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Stable under recommended storage conditions.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

Oxidizing agents may cause exothermic reactions.

#### 10.4. Conditions to avoid

Protect from frost, heat and sunlight.

#### 10.5. Incompatible materials



Oxidizing agents.

#### 10.6. Hazardous decomposition products

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO<sub>x</sub>), carbon oxides (CO<sub>x</sub>). Ammonia (NH<sub>3</sub>). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

### **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

##### Information on the product as supplied:

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (Estimated)
Acute dermal toxicity:	LD50/dermal/rat > 5000 mg/kg. (Estimated)
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Non-irritating to skin.
Serious eye damage/eye irritation:	Not irritating. (OECD 437)
Respiratory/skin sensitisation:	Not sensitizing.
Mutagenicity:	Not mutagenic.
Carcinogenicity:	Not carcinogenic.
Reproductive toxicity:	Not toxic for reproduction.
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	No known effect.
Aspiration hazard:	Due to the viscosity, this product does not present an aspiration hazard.

##### Relevant information on the hazardous components:

##### Distillates (petroleum), hydrotreated light

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (OECD 401)
Acute dermal toxicity:	LD50/dermal/rabbit > 5000 mg/kg (OECD 402)
Acute inhalation toxicity:	LC0/inhalation/4 hours/rat $\geq$ 4951 mg/m <sup>3</sup> (vapors) (OECD 403) (Based on results obtained from tests on analogous products)
Skin corrosion/irritation:	Not irritating. (OECD 404) Repeated exposure may cause skin dryness or cracking.

---

<i>Serious eye damage/eye irritation:</i>	Not irritating. (OECD 405)
<i>Respiratory/skin sensitisation:</i>	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
<i>Mutagenicity:</i>	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)
<i>Carcinogenicity:</i>	Carcinogenicity study in rats (OECD 451): Negative.
<i>Reproductive toxicity:</i>	By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days $\geq$ 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products)
<i>Aspiration hazard:</i>	May be fatal if swallowed and enters airways.
<u><i>Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched</i></u>	
<i>Acute oral toxicity:</i>	LD50/oral/rat = 500 - 2000 mg/kg
<i>Acute dermal toxicity:</i>	LD50/dermal/rabbit > 2000 mg/kg
<i>Acute inhalation toxicity:</i>	No data available.
<i>Skin corrosion/irritation:</i>	Not irritating. (OECD 404)
<i>Serious eye damage/eye irritation:</i>	Causes serious eye irritation. (OECD 405)
<i>Respiratory/skin sensitisation:</i>	The results of testing on guinea pigs showed this material to be non-sensitizing.
<i>Mutagenicity:</i>	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
<i>Carcinogenicity:</i>	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.

<i>Reproductive toxicity:</i>	Based on available data, product is not expected to be toxic for reproduction. Two-Generation Reproduction Toxicity (OECD 416) - NOAEL/rat > 250 mg/kg/day Prenatal Development Toxicity Study (OECD 414) - NOAEL/Maternal toxicity/rat > 50 mg/kg/day - NOAEL/Developmental toxicity/rat > 50 mg/kg/day
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/600 days = 50 mg/kg/day
<i>Aspiration hazard:</i>	No known effects.

## **SECTION 12: Ecological information**

### 12.1. Toxicity

#### Information on the product as supplied:

<i>Acute toxicity to fish:</i>	LC50/Fish/96 hours = 10 - 100 mg/L (Estimated)
<i>Acute toxicity to invertebrates:</i>	EC50/Daphnia magna/48 hours = 10 - 100 mg/L (Estimated)
<i>Acute toxicity to algae:</i>	Algal inhibition tests are not appropriate. The flocculation characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.
<i>Chronic toxicity to fish:</i>	No data available.
<i>Chronic toxicity to invertebrates:</i>	No data available.
<i>Toxicity to microorganisms:</i>	No data available.
<i>Effects on terrestrial organisms:</i>	No data available.
<i>Sediment toxicity:</i>	No data available.

#### Relevant information on the hazardous components:

##### Distillates (petroleum), hydrotreated light

<i>Acute toxicity to fish:</i>	LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L (OECD 203)
<i>Acute toxicity to invertebrates:</i>	EC0/Daphnia magna/48 hours > 1000 mg/L (OECD 202)
<i>Acute toxicity to algae:</i>	IC0/Pseudokirchneriella subcapitata/72 hours > 1000 mg/L (OECD 201)

Chronic toxicity to fish:	NOEC/Oncorhynchus mykiss/28 days > 1000 mg/L
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days > 1000 mg/L
Toxicity to microorganisms:	EC50/Tetrahymena pyriformis/ 48h > 1000 mg/L.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available. Readily biodegradable, exposure to sediment is unlikely.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Acute toxicity to fish:	LC50/Cyprinus carpio/96 hours = 1 - 10 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC50/Daphnia/48 hours = 1 - 10 mg/L (OECD 202)
Acute toxicity to algae:	IC50/Desmodesmus subspicatus/72 hours = 1 - 10 mg/L (OECD 201)
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days > 1 mg/L (OECD 202)
Toxicity to microorganisms:	EC10/activated sludge/17 hours > 10000 mg/L (DIN 38412-8)
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

12.2. Persistence and degradability

Information on the product as supplied:

Degradation:	Based on the degradability data of the components, this product is expected to be readily (bio)degradable according to OECD criteria.
Hydrolysis:	At natural pHs (>6) the polymer degrades due to hydrolysis to more than 70% in 28 days. The hydrolysis products are not harmful to aquatic organisms.
Photolysis:	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

*Degradation:* Readily biodegradable. 67.6% / 28 days (OECD 301 F) ; 68.8% / 28 days (OECD 306) ; 61.2% / 61 days (OECD 304 A)

*Hydrolysis:* Does not hydrolyse.

*Photolysis:* No data available.

*Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched*

*Degradation:* Readily biodegradable. > 60% / 28 days (OECD 301 B)

*Hydrolysis:* Does not hydrolyse.

*Photolysis:* No data available.

### 12.3. Bioaccumulative potential

*Information on the product as supplied:*

The product is not expected to bioaccumulate.

*Partition co-efficient (Log Pow):* Not applicable.

*Bioconcentration factor (BCF):* No data available.

*Relevant information on the hazardous components:*

*Distillates (petroleum), hydrotreated light*

*Partition co-efficient (Log Pow):* 3 - 6

*Bioconcentration factor (BCF):* No data available.

*Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched*

*Partition co-efficient (Log Pow):* > 3

*Bioconcentration factor (BCF):* No data available.

### 12.4. Mobility in soil

*Information on the product as supplied:*

No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Koc: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Koc: > 5000

12.5. Other adverse effects

None known.

**SECTION 13: Disposal considerations**

13.1. Waste treatment methods

Waste from residues/unused products:

Dispose in accordance with local and national regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling:

Store containers and offer for recycling of material when in accordance with the local regulations.

**SECTION 14: Transport information**

*Land transport (DOT)*

Not classified.

*Sea transport (IMDG)*

Not classified.

*Air transport (IATA)*

Not classified.

**SECTION 15: Regulatory information**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Information on the product as supplied:

TSCA Chemical Substances Inventory:

All components of this product are either listed as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

SARA (Section 311/312) hazard class:  
Not concerned.

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:  
Not concerned.

Section 304 - Reportable Quantity:  
Not concerned.

Section 313 (De minimis concentration):  
Not concerned.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:  
Not concerned.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:  
Not concerned.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:  
Not concerned.

RCRA status :

Not RCRA hazardous.

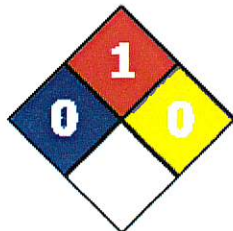
California Proposition 65 Information:

WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm, Acrylamide

**SECTION 16: Other information**NFPA and HMIS Ratings:

NFPA:

Health: 0  
Flammability: 1  
Instability: 0

**HMIS:**

Health: 0  
Flammability: 1  
Physical Hazard: 0  
PPE Code: B

This data sheet contains changes from the previous version in section(s):

SECTION 12. Ecological information, SECTION 16. Other Information.

Key or legend to abbreviations and acronyms used in the safety data sheet:

**Acronyms**

STOT = Specific target organ toxicity

**Abbreviations**

Acute Tox. 4 = Acute toxicity Category Code 4

Asp. Tox. 1 = Aspiration hazard Category Code 1

Eye Dam 1 = Serious eye damage/eye irritation Category Code 1

**Hazard statements**

H302 - Harmful if swallowed

H304 - May be fatal if swallowed and enters airways

H318 - Causes serious eye damage

**Training advice:**

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

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Version: 24.01.a

ENCC046



The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



# SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

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## **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

### 1.1. Product identifier

Product name: **CLARIFLOC™ C-311**

Type of product: Mixture.

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Processing aid for industrial applications.

Uses advised against: None.

### 1.3. Details of the supplier of the safety data sheet

Company: POLYDYNE INC  
1 Chemical Plant Road  
PO BOX 279  
Riceboro, GA 31323

Telephone: 1-800-848-7659

Telefax: (912)-884-8770

E-mail address: -

### 1.4. Emergency telephone number

24-hour emergency number: 1-800-424-9300

## **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

Classification according to paragraph (d) of 29 CFR 1910.1200:

Not classified.

### 2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s): None.

Signal word: None.

Hazard statement(s): None.

Precautionary statement(s): None.

### 2.3. Other hazards

Spills produce extremely slippery surfaces.

## **SECTION 3: Composition/information on ingredients**

### 3.1. Substances

Not applicable, this product is a mixture.

### 3.2. Mixtures

#### Hazardous components

##### Formaldehyde

Concentration/ -range: < 0.1%

CAS Number: 50-00-0

Classification according to paragraph (d)  
of 29 CFR 1910.1200:

Flam. Liq. 4;H227, Acute Tox. 3;H301, Acute Tox. 3;H311,  
Acute Tox. 3;H331, Skin Corr. 1B;H314, Eye Dam. 1;H318,  
Skin Sens. 1A;H317, Carc. 1B;H350, Muta. 2;H341

For explanation of abbreviations see section 16

## **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

#### *Inhalation:*

Move to fresh air. No hazards which require special first aid measures.

#### *Skin contact:*

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

#### *Eye contact:*

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Alternatively, rinse immediately with Diphoterine ®. Get prompt medical attention.

#### *Ingestion:*

Rinse mouth with water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

#### 4.2. Most important symptoms and effects, both acute and delayed

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

#### 4.3. Indication of any immediate medical attention and special treatment needed

None reasonably foreseeable.

#### Other information:

None.

### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

##### *Suitable extinguishing media:*

Water. Water spray. Foam. Carbon dioxide (CO<sub>2</sub>). Dry powder.  
Warning! Spills produce extremely slippery surfaces.

##### *Unsuitable extinguishing media:*

None known.

#### 5.2. Special hazards arising from the substance or mixture

##### *Hazardous decomposition products:*

Thermal decomposition may produce: nitrogen oxides (NO<sub>x</sub>), carbon oxides (CO<sub>x</sub>). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

#### 5.3. Advice for firefighters

##### *Protective measures:*

Wear self-contained breathing apparatus and protective suit.

##### *Other information:*

Spills produce extremely slippery surfaces.

### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### *Personal precautions:*

Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

##### *Protective equipment:*

Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

##### *Emergency procedures:*

Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

#### 6.2. Environmental precautions

As with all chemical products, do not flush into surface water.

### 6.3. Methods and material for containment and cleaning up

#### Small spills:

Do not flush with water. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

#### Large spills:

Do not flush with water. Dam up. Clean up promptly by scoop or vacuum.

#### Residues:

Soak up with inert absorbent material. After cleaning, flush away traces with water.

### 6.4. Reference to other sections

SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 13: Disposal considerations;

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not eat, drink or smoke.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

### 7.3. Specific end use(s)

None.

## **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

#### *Occupational exposure limits:*

#### Formaldehyde

OSHA: 0.75 ppm (8 hours) - 2 ppm (15 minutes)

ACGIH: 0.1 ppm (8 hours) - 0.3 ppm (15 minutes)

### 8.2. Exposure controls

#### Appropriate engineering controls:

Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

#### Individual protection measures, such as personal protective equipment:

##### a) *Eye/face protection:*

Safety glasses with side-shields.

**b) Skin protection:**

i) **Hand protection:** PVC or other plastic material gloves.

ii) **Other:** Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur.

**c) Respiratory protection:**

No personal respiratory protective equipment normally required.

**d) Additional advice:**

Wash hands and face before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday.

**Environmental exposure controls:**

Do not allow uncontrolled discharge of product into the environment.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

a) <b>Appearance:</b>	Liquid, Clear to slightly opalescent.
b) <b>Odour:</b>	Amine-like.
c) <b>Odour Threshold:</b>	Not applicable.
d) <b>pH:</b>	8.0 - 11.5 (See Technical Bulletin or Product Specifications for a more precise value, if available)
e) <b>Melting point/freezing point:</b>	< 5°C
f) <b>Initial boiling point and boiling range:</b>	> 100°C
g) <b>Flash point:</b>	Does not flash.
h) <b>Evaporation rate:</b>	No data available.
i) <b>Flammability (solid, gas):</b>	Not applicable.
j) <b>Upper/lower flammability or explosive limits:</b>	Not expected to create explosive atmospheres.
k) <b>Vapour pressure:</b>	2.3 kPa @ 20°C
l) <b>Vapour density:</b>	0.804 g/L @ 20°C
m) <b>Relative density:</b>	1.0 - 1.1 (See Technical Bulletin or Product Specifications for a more precise value, if available)
n) <b>Solubility(ies):</b>	Completely miscible.
o) <b>Partition coefficient n-octanol/water (log value):</b>	< 0
p) <b>Autoignition temperature:</b>	Does not self-ignite (based on the chemical structure).
q) <b>Decomposition temperature:</b>	> 150°C

r) Viscosity:	See Technical Bulletin.
s) Kinematic viscosity:	No data available.
t) Explosive properties:	Not expected to be explosive based on the chemical structure.
u) Oxidizing properties:	Not expected to be oxidising based on the chemical structure.
v) Particle characteristics:	No data available.

#### 9.2. Other information

None.

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Stable under recommended storage conditions.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

Oxidizing agents may cause exothermic reactions.

#### 10.4. Conditions to avoid

Protect from frost, heat and sunlight.

#### 10.5. Incompatible materials

Oxidizing agents.

#### 10.6. Hazardous decomposition products

Thermal decomposition may produce: nitrogen oxides (NO<sub>x</sub>), carbon oxides (CO<sub>x</sub>), hydrogen cyanide (hydrocyanic acid).

### **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

##### Information on the product as supplied:

Acute oral toxicity: LD50/oral/rat > 5000 mg/kg

Acute dermal toxicity: LD50/dermal/rat > 5000 mg/kg.

Acute inhalation toxicity: Testing by the inhalation route is inappropriate because exposure of humans via inhalation is unlikely: the substance has no vapour pressure and there is practically no exposure to inhalable aerosols.

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<i>Skin corrosion/irritation:</i>	Non-irritating to skin.
<i>Serious eye damage/eye irritation:</i>	Slightly irritating.
<i>Respiratory/skin sensitisation:</i>	The product contains a small amount of sensitising substances which may provoke an allergic reaction among sensitive individuals in contact with skin.
<i>Mutagenicity:</i>	By analogy with similar products, this product is not expected to be mutagenic.
<i>Carcinogenicity:</i>	By analogy with similar substances, this substance is not expected to be carcinogenic.
<i>Reproductive toxicity:</i>	By analogy with similar substances, this substance is not expected to be toxic for reproduction.
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	No known effect.
<i>Aspiration hazard:</i>	No hazards resulting from the material as supplied.

Relevant information on the hazardous components:

Formaldehyde

<i>Acute oral toxicity:</i>	LD50/oral/rat = 50 - 300 mg/kg (OECD 401)
<i>Acute dermal toxicity:</i>	LD50/dermal/rat = 270 mg/kg.
<i>Acute inhalation toxicity:</i>	LC50/inhalation/4 hours/rat = 588 mg/m <sup>3</sup> (gas) (OECD 403)
<i>Skin corrosion/irritation:</i>	Causes severe irritation and or burns. (OECD 404)
<i>Serious eye damage/eye irritation:</i>	Risk of serious damage to eyes.
<i>Respiratory/skin sensitisation:</i>	Sensitizing to skin. (OECD 406)
<i>Mutagenicity:</i>	Possible mutagen.
<i>Carcinogenicity:</i>	May cause cancer.
<i>IARC:</i>	1
<i>Reproductive toxicity:</i>	Not toxic for reproduction.
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	No known effect.



Aspiration hazard: No known effects.

## **SECTION 12: Ecological information**

### 12.1. Toxicity

#### Information on the product as supplied:

Acute toxicity to fish: LC50/Fish/96 hours > 100 mg/L (OECD 203)

Acute toxicity to invertebrates: EC50/Daphnia magna/48 hours > 100 mg/L (OECD 202)

Acute toxicity to algae: Algal inhibition tests are not appropriate. The flocculation characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.

Chronic toxicity to fish: No data available.

Chronic toxicity to invertebrates: No data available.

Toxicity to microorganisms: No data available.

Effects on terrestrial organisms: No data available.

Sediment toxicity: No data available.

#### Relevant information on the hazardous components:

##### Formaldehyde

Acute toxicity to fish: LC50/Fish/96 hours = 1 - 10 mg/L

Acute toxicity to invertebrates: EC50/Daphnia pulex/48 hours = 10 - 100 mg/L (OECD 202)

Acute toxicity to algae: IC50/Desmodesmus subspicatus/72 hours = 1 - 10 mg/L (OECD 201)

Chronic toxicity to fish: No chronic exposure due to ready biodegradability.

Chronic toxicity to invertebrates: No chronic exposure due to ready biodegradability.

Toxicity to microorganisms: EC50/activated sludge/120 hours = 34.1 mg/L

Effects on terrestrial organisms: Not expected to be toxic.

Sediment toxicity: Exposure to sediment is unlikely.

## 12.2. Persistence and degradability

Information on the product as supplied:

Degradation: Not readily biodegradable.

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

Relevant information on the hazardous components:Formaldehyde

Degradation: Readily biodegradable. > 90% / 14 days (OECD 301 C) ; > 90% / 28 days (OECD 301 D)

Hydrolysis: Does not hydrolyse.

Photolysis: Half-life (direct photolysis): 1.71 days

## 12.3. Bioaccumulative potential

Information on the product as supplied:

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow): < 0

Bioconcentration factor (BCF): ~0

Relevant information on the hazardous components:Formaldehyde

Partition co-efficient (Log Pow): 0.35 @ 25°C, pH = 3.5

Bioconcentration factor (BCF): < 1

## 12.4. Mobility in soil

Information on the product as supplied:

Exposure to soil is not to be expected.

K<sub>oc</sub>: No data available.

Relevant information on the hazardous components:

Formaldehyde

Koc: 15.9

12.5. Other adverse effects

None known.

**SECTION 13: Disposal considerations**

13.1. Waste treatment methods

Waste from residues/unused products:

Dispose in accordance with local and national regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations.

Recycling:

Store containers and offer for recycling of material when in accordance with the local regulations.

**SECTION 14: Transport information**

*Land transport (DOT)*

Not classified.

*Sea transport (IMDG)*

Not classified.

*Air transport (IATA)*

Not classified.

**SECTION 15: Regulatory information**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Information on the product as supplied:

TSCA Chemical Substances Inventory:

All components of this product are either listed as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

SARA (Section 311/312) hazard class:  
Not concerned.

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:  
Contains one or more of the listed substances.

Section 304 - Reportable Quantity:  
Contains one or more of the listed substances.

Section 313 (De minimis concentration):  
Contains one or more of the listed substances.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:  
Contains one or more of the listed substances.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:  
Contains one or more of the listed substances.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:  
Contains one or more of the listed substances.

RCRA status :

Not RCRA hazardous.

California Proposition 65 Information:

WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm, Formaldehyde (gas), Acrylamide

Relevant information on the hazardous components:

Formaldehyde

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity: 100 lbs

Section 304 - Reportable Quantity: 100 lbs

Section 313 (De minimis concentration): 1%

Clean Water Act

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Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity: 100 lbs

Clean Air Act  
Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity: 15000 lbs

CERCLA  
Hazardous Substances List (40 CFR 302.4) - Reportable Quantity: 100 lbs

RCRA status : Listed  
Hazardous waste number : U122

DOT RQ (lbs): 100 lbs

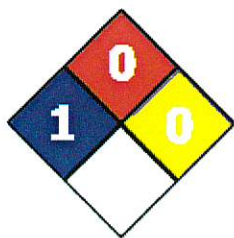
California Proposition 65 Information: Formaldehyde (gas), Listed.

**SECTION 16: Other information**

NFPA and HMIS Ratings:

NFPA:

Health: 1  
Flammability: 0  
Instability: 0



HMIS:

Health: 1  
Flammability: 0  
Physical Hazard: 0  
PPE Code: B

This data sheet contains changes from the previous version in section(s):

SECTION 8. Exposure controls/personal protection, SECTION 16. Other Information.

Key or legend to abbreviations and acronyms used in the safety data sheet:

*Acronyms*

STOT = Specific target organ toxicity

*Abbreviations*

Acute Tox. 3 = Acute toxicity Category Code 3

Carc. 1B = Carcinogenicity Category Code 1B

Flam. Liq. 4 = Flammable liquid Category Code 4

Muta. 2 = Germ cell mutagenicity Category Code 2

Skin Corr. 1B = Skin corrosion/irritation Category Code 1B

Skin Sens. 1A = Skin sensitization Category Code 1A

*Hazard statements*

H227 - Combustible liquid

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H331 - Toxic if inhaled

H341 - Suspected of causing genetic defects

H350 - May cause cancer

Training advice:

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

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Version: 22.01.a

LDCC024

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



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# EVALUATION REPORT

**Send To: C0248410**

Mr. John Davies  
PO Box 405  
Willow Springs, IL 60480

**Facility: C0248410**

Rowell Chemical  
10100 South Archer  
Willow Springs IL 60480  
United States

Result	PASS	Report Date	22-FEB-2024
Customer Name	Rowell Chemical Corporation		
Tested To	NSF/ANSI/CAN 60		
Description	Sodium Hypochlorite 12.5%   Liquid		
Trade Designation	Sodium Hypochlorite 12.5%		
Test Type	Annual Collection		
Job Number	A-00479640		
Project Number	W0876576		
Project Manager	Lena Hope		

This report documents the testing of the referenced product to the requirements of NSF/ANSI/CAN Standard 60 (Drinking Water Treatment Chemicals - Health Effects). This standard establishes minimum requirements for chemicals, the chemical contaminants, and impurities that are added to drinking water from drinking water treatment chemicals. Contaminants produced as by-products through reaction of the treatment chemical with a constituent of the drinking water are not covered by this Standard. Reference the "About the Standard" section at the end of this report for additional information about NSF/ANSI/CAN Standard 60 and the products covered under this Standard.

**Thank you for having your product tested by NSF.**

Please contact your Project Manager if you have any questions or concerns pertaining to this report.

**Report Authorization**   
Scott E. Randall - Senior Manager Commercial Water

**Date** 22-FEB-2024



**General Information**

Standard: NSF/ANSI/CAN 60  
Chemical Name: Sodium Hypochlorite 12.5% w/w  
Lot Number/Product Identifier: 012524BT17  
Maximum Use Level: 84 mg/L  
Monitor Code: A  
Physical Description of Sample: Liquid  
Tested DCC Number: DA08514  
Trade Designation/Model Number: Sodium Hypochlorite 12.5%

Sample Id: **S-0002081209**  
Description: Sodium Hypochlorite 12.5% | Liquid  
Sampled Date: 06-Feb-2024  
Received Date: 31-Jan-2024

Tox Normalization Information:		Lab Normalization Information:	
Calculated NF	0.100	Date exposure completed	06-FEB-2024
Preparation method used	B	Final volume of solution	0.25 L
MUL	84 mg/L	Mass of material used	210 mg
Compound Reference Key:	SPAC		

**Normalization Calculation:**

Normalized Result = Test Result (ug/L) \* NF                      Where NF = MUL (mg/L) \*  $\frac{\text{Final Volume Of Solution (L)}}{\text{Mass of Material Used (mg)}}$

- MUL = Maximum Use Level;
- Mass of Material Used = The mass of sample analyzed in the laboratory;
- Final Volume of Solution = The volume of water used to dilute the sample;
- An additional factor may be used to adjust the analytical result to field use conditions to account for product carryover, flushing, or other assumptions stipulated with the use of the product. If an additional factor is used, it is included in the information above.

Testing Parameter	Units	Sample	Control	Result	Norm. Result	Acceptance Criteria(1)	Evaluation Status
<b>Ann Arbor Chemistry Lab</b>							
Metals II in water by ICPMS (Ref: EPA 200.8)							
Arsenic	ug/L	ND(1)	ND(1)	ND(1)	ND(0.1)	1	Pass
Barium	ug/L	ND(1)	ND(1)	ND(1)	ND(0.1)	200	Pass
Beryllium	ug/L	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.05)	0.4	Pass
Cadmium	ug/L	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.02)	0.5	Pass
Chromium	ug/L	ND(1)	ND(1)	ND(1)	ND(0.1)		
Copper	ug/L	2	ND(1)	2	0.2	130	Pass
Mercury	ug/L	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.02)	0.2	Pass
Lead	ug/L	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.05)	0.5	Pass
Antimony	ug/L	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.05)	0.6	Pass
Selenium	ug/L	ND(1)	ND(1)	ND(1)	ND(0.1)	5	Pass
Thallium	ug/L	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.02)	0.2	Pass
Volatile Organic Compounds (Ref: EPA 524.2)							
Dichlorodifluoromethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.3	Pass
Chloromethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	3	Pass
Vinyl Chloride	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.2	Pass
Bromomethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	1	Pass





Sample Id: S-0002081209

Testing Parameter	Units	Sample	Control	Result	Norm. Result	Acceptance Criteria(1)	Evaluation Status
<b>Ann Arbor Chemistry Lab ( Continued )</b>							
Chloroethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	40	Pass
Trichlorofluoromethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	50	Pass
Trichlorotrifluoroethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.3	Pass
Methylene Chloride	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.5	Pass
1,1-Dichloroethylene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.7	Pass
trans-1,2-Dichloroethylene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	10	Pass
1,1-Dichloroethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.3	Pass
2,2-Dichloropropane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.3	Pass
cis-1,2-Dichloroethylene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	7	Pass
Chloroform	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	[TTHM]	
Bromochloromethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	9	Pass
1,1,1-Trichloroethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	20	Pass
1,1-Dichloropropene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
Carbon Tetrachloride	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.5	Pass
1,2-Dichloroethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.5	Pass
Trichloroethylene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.5	Pass
1,2-Dichloropropane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.5	Pass
Bromodichloromethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	[TTHM]	
Dibromomethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
cis-1,3-Dichloropropene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.2	Pass
trans-1,3-Dichloropropene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.2	Pass
1,1,2-Trichloroethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
1,3-Dichloropropane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	10	Pass
Tetrachloroethylene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.5	Pass
Chlorodibromomethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	[TTHM]	
Chlorobenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	10	Pass
1,1,1,2-Tetrachloroethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	1	Pass
Bromoform	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	[TTHM]	
1,1,2,2-Tetrachloroethane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.2	Pass
1,2,3-Trichloropropane	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	4	Pass
1,3-Dichlorobenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	60	Pass
1,4-Dichlorobenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	7.5	Pass
1,2-Dichlorobenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	60	Pass
Carbon Disulfide	ug/L	ND(4)	ND(1)	ND(4)	ND(0.4)	70	Pass
Methyl-tert-Butyl Ether (MTBE)	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	8000	Pass
tert-Butyl ethyl ether	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	600	Pass
Methyl Ethyl Ketone	ug/L	ND(20)	ND(5)	ND(20)	ND(2.0)	400	Pass
Methyl Isobutyl Ketone	ug/L	ND(20)	ND(5)	ND(20)	ND(2.0)	700	Pass

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Sample Id: S-0002081209

Testing Parameter	Units	Sample	Control	Result	Norm. Result	Acceptance Criteria(1)	Evaluation Status
<b>Ann Arbor Chemistry Lab ( Continued )</b>							
Toluene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	6	Pass
Ethyl Benzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	14	Pass
m+p-Xylenes	ug/L	ND(4)	ND(1)	ND(4)	ND(0.4)	[Xylenes]	
o-Xylene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	[Xylenes]	
Styrene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	10	Pass
Isopropylbenzene (Cumene)	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	70	Pass
n-Propylbenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
Bromobenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
2-Chlorotoluene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
4-Chlorotoluene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
1,3,5-Trimethylbenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
tert-Butylbenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
1,2,4-Trimethylbenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
sec-Butylbenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
p-Isopropyltoluene (Cymene)	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
1,2,3-Trimethylbenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
n-Butylbenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)		
1,2,4-Trichlorobenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	7	Pass
Hexachlorobutadiene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.4	Pass
1,2,3-Trichlorobenzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.3	Pass
Naphthalene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	10	Pass
Benzene	ug/L	ND(2)	ND(0.5)	ND(2)	ND(0.2)	0.5	Pass
Total Trihalomethanes	ug/L	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.05)	8	Pass
Total Xylenes	ug/L	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.05)	9	Pass
1 - If the acceptance criteria is blank and the evaluation status is "Fail", then the criteria used will be noted on the letter accompanying these results.							
[Xylenes] - Acceptance based on Total Xylenes							
[TTHM] - Acceptance based on Total Trihalomethanes							

Sample Id: S-0002081212

Description: Sodium Hypochlorite 12.5% | Liquid

Sampled Date: 25-Jan-2024

Received Date: 31-Jan-2024

Quenched Date: 25-JAN-2024 00:00

<b>Tox Normalization Information:</b>		<b>Lab Normalization Information:</b>	
Calculated NF	0.0000779	Date exposure completed	06-FEB-2024
MUL	84 mg/L		
Density Value Applied	1.2 g/mL		
Compound Reference Key:	SPAC		



Sample Id: S-0002081212

**Normalization Calculation:**

Normalized Result = Test Result \* NF \* (10<sup>3</sup> ug/L mg)

Where NF = MUL (mg/L) \* Malonic Acid Dilution Correction (ml/ml) \* (1/Product Density (g/ml)) \*  $\frac{1 \text{ L}}{10^3 \text{ ml}} * \frac{1 \text{ g}}{10^3 \text{ mg}}$

- Malonic Acid Dilution Correction = ((Volume of Hypochlorite Sampled + Malonic Acid) / Volume of Hypochlorite Sampled)
- Volume of Hypochlorite Sampled = (Volume of Hypochlorite Sample Received(ml) - (Malonic Acid (g) \* (1 / Density of Malonic Acid (g/ml))))
- Volume of Hypochlorite Sample Received = Volume of Hypochlorite Sampled + Malonic Acid
- Unit conversion: 1 L = 10<sup>3</sup> ml, 1 g = 10<sup>3</sup> mg;

Testing Parameter	Units	Sample	Result	Norm. Units	Norm. Result	Acceptance Criteria(1)	Evaluation Status
<b>Ann Arbor Chemistry Lab</b>							
Oxyhalides in Bleach by LCMS							
Perchlorate	mg/L	ND(1)	ND(1)	ug/L	ND(0.08)	5	Pass
Chlorate	mg/L	990	990	ug/L	77	300	Pass
Bromate	mg/L	7	7	ug/L	0.5	3.3	Pass
1 - If the acceptance criteria is blank and the evaluation status is "Fail", then the criteria used will be noted on the letter accompanying these results.							



**Common Terms and Acronyms Used:**

Sample.....	Test result on the submitted product sample after prepared or exposed in accordance with the standard.
Control.....	Test result on a laboratory blank sample analyzed in parallel with the sample.
Result.....	Sample test result minus the Control test result.
Normalized Result..	Result normalized in accordance with the test standard to reflect potential at-the-tap concentrations
ND().....	Result is below the detection level of the analytical procedure as identified in the parenthesis.
DCC Number.....	NSF document control code of the registered formulation of the product tested
ug/L.....	Microgram per liter = 0.001 milligram per liter (mg/L)
SPAC.....	Acceptance criteria of the standard (Single Product Allowable Concentration)

**References to Testing Procedures:**

NSF Reference	Parameter / Test Description
C0931	Oxyhalides in Bleach by LCMS
C1183	Metals II in water by ICPMS (Ref: EPA 200.8)
C4662	Volatile Organic Compounds (Ref: EPA 524.2)

Test descriptions preceded by an asterisk "\*" indicate that testing has been performed per NSF requirements but is not within its scope of accreditation.

Unless otherwise indicated, method uncertainties are not applied in any determinations of conformity. Testing utilizes the requested sections of any referenced standards, which may not be the entire standard.

**Dates of Laboratory Activity: 31-JAN-2024 to 09-FEB-2024**

**Testing Laboratories:**

All work performed at:	Id	Address
—————→	NSF_AA	NSF 789 N. Dixboro Road Ann Arbor MI 48105



**About the Standard:**

NSF/ANSI/CAN Standard 60: Drinking Water Treatment Chemicals - Health Effects

NSF/ANSI/CAN 60 establishes minimum health effects requirements for the chemicals, the chemical contaminants, and the impurities that are directly added to drinking water from drinking water treatment chemicals. It does not establish performance or taste and odor requirements. The standard contains requirements for chemicals that are directly added to water and are intended to be present in the finished water as well as other chemical products that are added to water but are not intended to be present in the finished water. Chemicals covered by this Standard include, but are not limited to, coagulation and flocculation chemicals, softening, precipitation, sequestering, pH adjustment, and corrosion/scale control chemicals, disinfection and oxidation chemicals, miscellaneous treatment chemicals, and miscellaneous water supply chemicals.

The testing performed to this standard is done to estimate the level of contaminants or impurities added to drinking water when the chemical is used at the "Maximum Use Level" under attestation. Prior to testing, information is obtained on the formulation and sources of supply used to manufacture the chemical. This information is then reviewed along with the minimum requirements of the standard to establish the potential contaminants of concern. A representative sample of chemical is obtained for testing. The chemical sample is prepared for analysis through specific methods established in the standard based on the type of chemical and then is analyzed for potential contaminants determined during the formulation review. The laboratory results are normalized to represent potential at-the-tap values and then compared to the "single product allowable concentration" (SPAC) established by the standard. The product is found in compliance with the standard if the normalized value is less than or equal to the allowable concentration.